25X1 [redacted]

INTELLOFAX 5

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

CD NO. 25X1

25X1 COUNTRY USSR (Saratov Oblast)

DATE DISTR. 13 March 1952

25X1 SUBJECT Aircraft Plant [redacted] at Saratov

NO. OF PAGES 3

[redacted]

NO. OF ENCLS. 8 (LISTED BELOW)

25X1 SUPPLEMENT TO REPORT NO.

[redacted]

THIS IS UNEVALUATED INFORMATION

[redacted]

25X1

1. The Aircraft Plant [redacted] in Saratov, called Zavod Kombain by the Soviets, is located on the southwestern edge of Saratov (46°02'E/51°34'N).

25X1

2. The damage caused by an aerial attack in 1943 was not yet completely repaired. New workshops were being erected simultaneously with the repair work on damaged installations. [redacted] that Plant [redacted] 25X1 was a modernly equipped and well managed plant. The plant was awarded the title of " Model Factory" ("vorbildliche Fabrik").

3. The factory field located southwest of Plant [redacted] was observed only from a distance. The field was equipped with two runways intersecting each other at about right angles. Each runway was about 1,200 meters long. [redacted] 25X1 25X1 [redacted] a new runway, or the widening of one of the existing runways, was under way. The field had boundary and obstacle lights. One signal light was also available. [redacted] this field was 25X1 a factory and commercial installation. About six German Ju-52s painted white, one Spitfire, and two Fieseler Storch planes were stationed at the field. However, these aircraft did not fly. Seven passenger and transport planes were also seen at the field. (2) Aircraft observed while being tested included a two-seater conventional piston fighter which was noticed up to November 1949; a jet fighter, seen for the first time in May 1947, which was tested almost daily, and a new type of jet fighter seen for the first time in mid-September 1949. This new type was seen much less frequently than the other type of jet fighter. [redacted] this 25X1 new plane was a tailless design but later said that it was fitted with a tail assembly which had a high elevator. (3)

4. Up to May 1948, an average of 12 aircraft were produced daily. [redacted] 25X1 25X1 [redacted] seven of these could be declared airworthy after being flight tested; but the remaining five planes required extensive changes. The aircraft in production at the plant was a conventional two-seater, single-engine, low-wing monoplanes fitted with double-row radial engines. The engines, which were seen in the engine ware- 25X1 house [redacted] were 14 to 18-cylinder double-row, radial engines. [redacted] 25X1 25X1 [redacted] some of the aircraft were fitted with two auxiliary tanks. (4) Two thirds of the aircraft manufactured at the plant were delivered to

CLASSIFICATION CONFIDENTIAL [redacted] 25X1

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ARMY	X	AIR	X	FBI							

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Communist China. From 8 to 16 complete aircraft and the pertinent spare parts were loaded on one train. The remainder were flown to some unknown destination. Occasionally individual railroad cars were loaded with air frame parts and engines and sent to various places in the U.S.S.R. a Soviet sergeant that approximately 2,000 aircraft per year were delivered by the plant to various air units. (5)

5. Details on production methods were not available since the assembly hall was off limits and the other workshops were seen only for short periods of time. An assembly line was noticed in one of the workshops. In the acid bath department, it was observed that the sheet aluminum for the outer skin was drawn through all eight acid baths and then placed in a water bath. Aluminum scrap was cast into ingots in the smeltor and then shipped out by rail. Indicator devices for instrument boards, control sticks, shock-absorbing struts and brake systems as well as tire gauges, were seen in the instruments warehouse. The duralumin sheets were 3-mm to 5-mm thick.

6. Incoming rail shipments included double-row, radial engines, duralumin sheets, of which about four railroad cars arrived daily, and aluminum parts from the Northern Ural. Shock-absorbing struts, propellers, and control sticks arrived irregularly, mostly in shipments of 100 units. Aircraft measuring instruments and radio sets arrived by air. As far as could be remembered, the boxes were lettered Stalina Instrument Plant, Leningrad. The tires came from the Soviet Zone of Germany; the boxes were believed to have been lettered VEB Saechsische Gummiwerke (Saxon Rubber Plant, Nationalized Enterprise). Aircraft seats were delivered by in Saratov and ball bearings from Ball Bearing Plant . Fuels and oils were supplied by a local refinery. (6)

7. The manager of the plant was a civilian who spoke good German. Chief engineer Papki, (fnu), was chief of all lumber yards and of all wood-working shops. The construction work was supervised by one Schwarzkopf, (fnu), and Igin Pavlich. Ivan Ivanovich Kurev, an ex-captain, was in charge of all the supply warehouses of the plant. Major Chevshenkov, (fnu), was the party secretary at the plant. Captain Shurov (fnu), was one of the three test pilots with whom source was on friendly terms. Shurov was given a monthly salary of 10,000 rubles. Two German engineers were also known to work at the plant. Only the name of one, Schindler, (fnu), was remembered. According to Soviets, the plant had a work force of approximately 20,000 working three shifts. Sixty percent of the workers were women.

8. The plant was inspected almost daily. Most of the inspection groups which came from Moscow were composed of 10 persons, half of them civilians, and the other half high-ranking officers.

9. The plant, surrounded by a heavily guarded board fence 2 meters high, had a coat of camouflage paint. No air defense measures or AA gun emplacements were seen. The factory fire brigade was equipped with eight modern motor pumps.

Comments.

(1) In late 1943, the plant produced to capacity. For layout sketch of the plant, see Annex 1. The legend to Annex 1, which was presumably given on the basis of an old aerial photograph, is not correct on all points. It was stated that

scrap smelting furnaces were located in the wing and fuselage assembly department, item 5. According to previous reports, the building identified as No 11 housed a foundry rather than the assembly hall. It is therefore believed more likely that the smelting furnaces were located in building [redacted] The 25X1
25X1 information furnished [redacted] as to the purpose of the individual plant buildings appears to be superficial and not very factual.

(2) For sketch of commercial aircraft, see Annex 2.

(3) For sketches of the jet fighters [redacted] see Annexes 3 and 4. 25X1
The jet fighter reproduced in Annex 3 is believed to be a craft which made an intermediate landing at the factory field. It is not believed to have been manufactured at the plant. However, according to previous information the jet fighter with swept-back wings seems to have been built in quantity at the plant after 1949.

(4) A daily output of 12 aircraft in May 1948 appears improbable. According to available informations, a Yak fighter was built in Plant [redacted] after the 25X1
war and the production of a two-seater trainer was started in late 1947. It is believed that the monthly output did not exceed 180 aircraft in the summer of 1948. The type described is believed to be the Yak-20, previously designated Yak -11. This plane is fitted with an ASh-21, single-row, radial engine. For details of this fighter see Annexes 5, 6, 7 and 8.

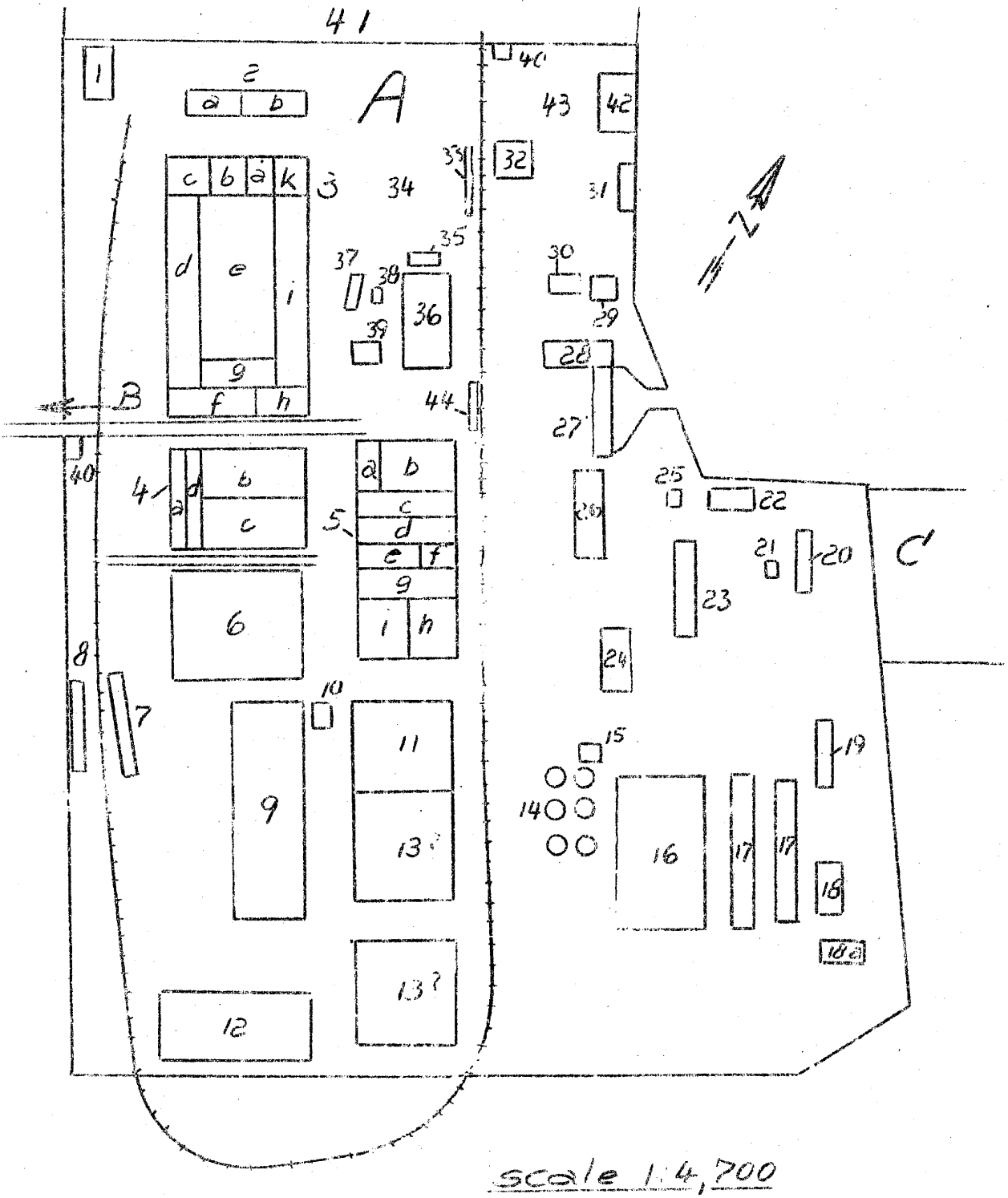
(5) This figure would support the assumption that the monthly output of the plant amounted to 160 to 170 aircraft.

25X1 (6) Plants [redacted] in Leningrad are known to manufacture radio sets for the Soviet Air Force. . VEB Saechsische Gummiwerke does not exist; only a VEB Gummiwerke Riesa, which might be concerned, is known. Whether aircraft tires are being manufactured at this plant is not known. According to wartime records, there was a machine tool factory under construction in addition to the ball bearing plant. From the
25X1 sketch [redacted] it is believed that this factory is identical with the installation he called [redacted] 25X1

25X1

Layout of Aircraft Plant [redacted] in Saratov

25X1



[illegible] see [illegible] page

CONFIDENTIAL [redacted]

25X1

25X1

25X1

Legend.

25X1 A. Aircraft Plant [redacted].

B. Road Leading to Airfield.

25X1 C. Plant [redacted]

1. Boiler house with six natural gas-fired boilers.

2. Forge.

   a. This department was equipped with seven compressed air hammers and two conveyor belts;

   b. This department was equipped with five small gas-fired annealing furnaces three electric furnaces developing a heat of up to 2,000° C and one large and several small cutting presses.

3. Machine Shop.

   a. Lathe shop.

   b. Lathe shop.

   c. Lathe shop.

   d. Autogenous welding shop with 60 welding stations.

   e. Lathe department for small parts.

   f. Annealing shop equipped with 2½ electric furnaces and oil and water baths.

   g. Supply warehouse.

   h. Material testing department of the annealing shop.

   i. Shaft turning shop.

   k. Small forge for factory requirements.

4. Annealing and welding shop.

   a. Section of workshop which was being built up. It was equipped with five gas-burning annealing furnaces and five portable electric annealing furnaces. Production there had not yet started.

   b. Section fitted with sand blast apparatus.

   c. Autogenous welding section for bulkhead frames, with eight welding stations, about 25 special machines and two material testing stations fitted with X-ray apparatus.

   d. No details available.

5. Wing and fuselage department.

   a. Eight annealing baths, each of them about 5x3x1½ meters.

25X1

25X1 CONFIDENTIAL/[redacted]

25X1

b. Modification section.

c. Fuselage section.

d. Wing section.

e. Manufacture of wings or tail assemblies.

f. Plexiglass molding section.

g. Manufacture of airframe parts.

h. Scrap smelting furnaces.

i. Punching shop for tanks and other accessories.

6. Workshop under construction.

7. Measuring instruments warehouse.

8. Warehouse for duralumin sheets and engines. This was a wooden structure.

9. Workshop under construction.

10. Water pool.

11. Aircraft assembly hall.

12. Workshop under construction.

13. Workshop under construction.

14. Six fuel tanks, about 8 meters high and 5 meters in diameter.

15. Fuel pump installation.

16. Foundations for a new workshop.

17. Storage facilities for lumber used in the manufacture of boxes and crates.

18. Storage facilities for tarpaper used in the manufacture of boxes and crates.

18a. Issuing office for lumber and tarpaper used in making crates.

19. Civilian factory; manufacture of kitchen goods, bicycles and mattresses.

20. Carpenter shop where crates were manufactured.

21. Sand drying plant.

22. Sewing of aircraft covers.

23. Oil dump and electric repair shop.

24. Chalk crushing mill and workshops.

25. Dugouts.

25X1

26. Locksmith shop.

27. Main gate.

28. Administrative offices, a five-story building, with switchboard and radio control board.

29. Garage and side entrance.

30. Laboratory and X-ray shop.

31. Fire station.

32. Dugouts.

33. Loading ramp for shavings.

34. Scrap dump.

35. Laboratory.

36. Main warehouse for parachutes, flying suits and tools.

37. Engine storage facilities.

38. Square tower, 12 meters high.

39. Emergency power unit.

40. Guard houses.

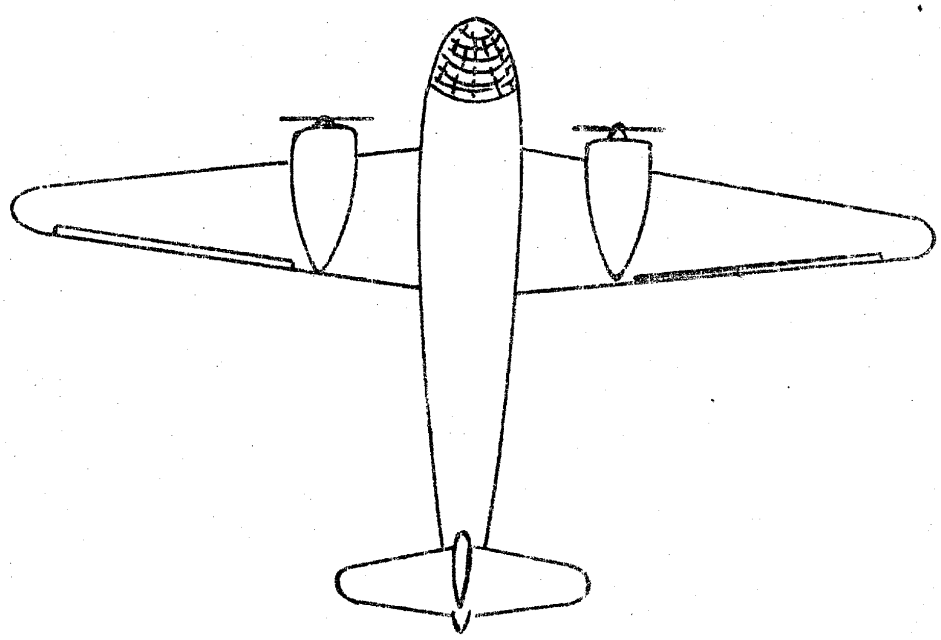
41. Construction yard.

42. Tube warehouse.

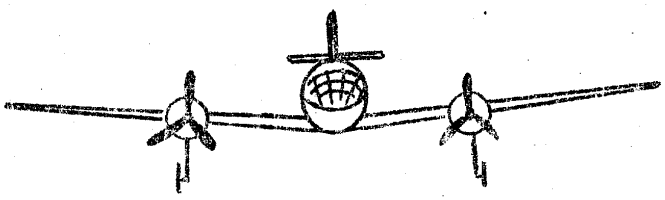
43. Timber yard.

44. Loading ramp for shipping of aircraft.

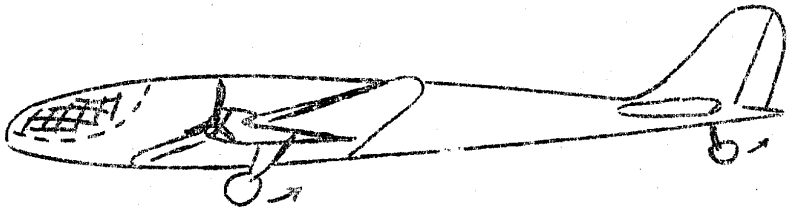
Twin-Engine Commercial Plane Seen in Saratov



Top view

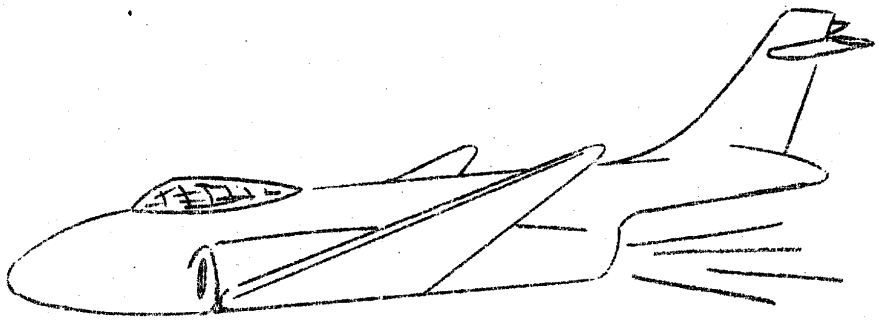


Front view

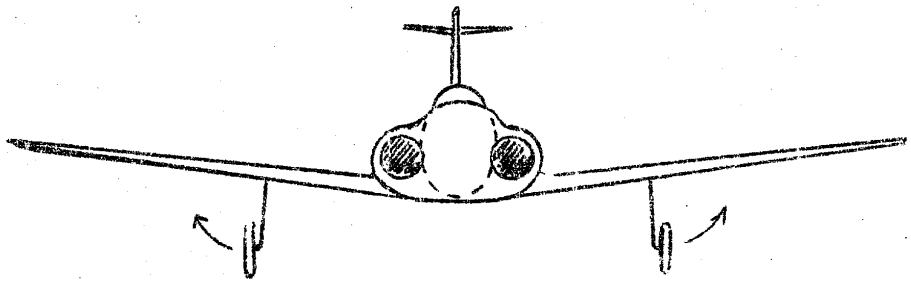


Side view

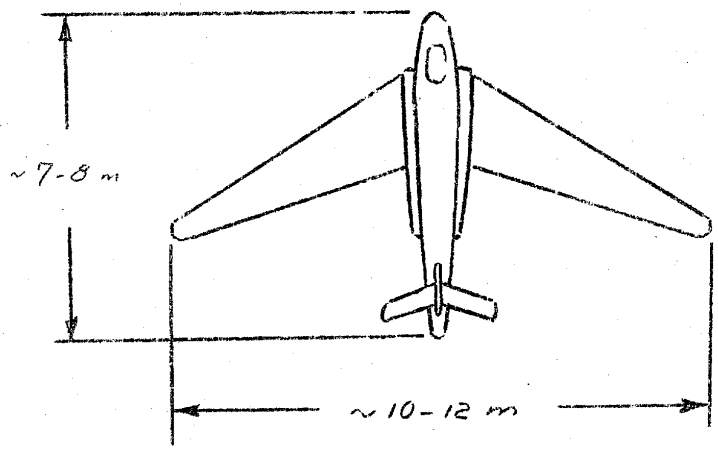
Jet Fighter as Seen in Saratov



Side view

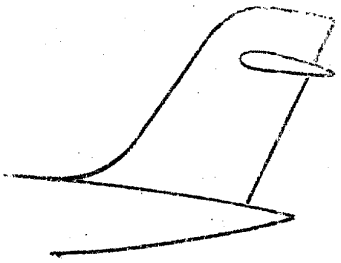


Front View

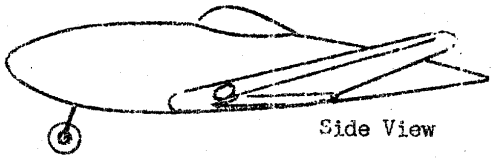


Top view

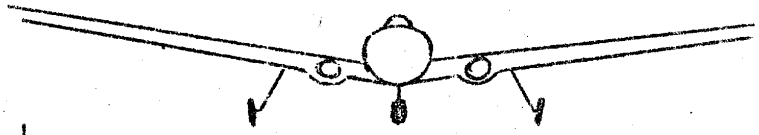
Jet Fighter as Observed in Saratov after September 1949



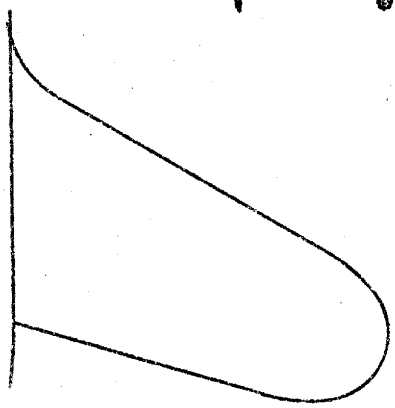
Tail Assembly



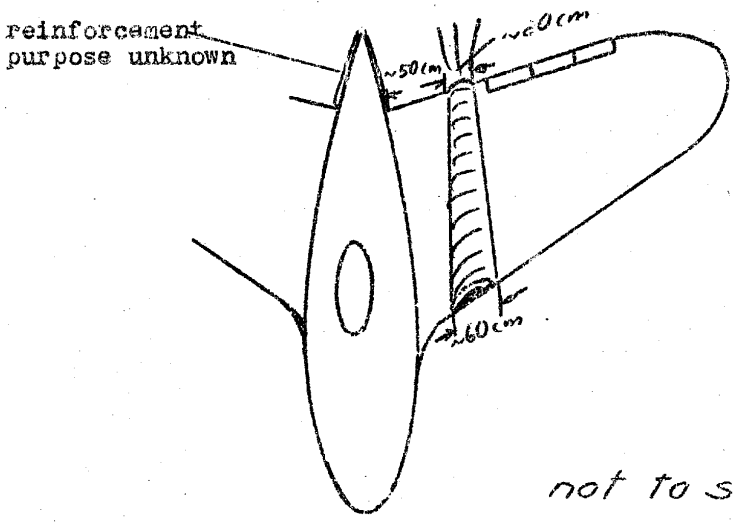
Side View



Front View



Wing Shape

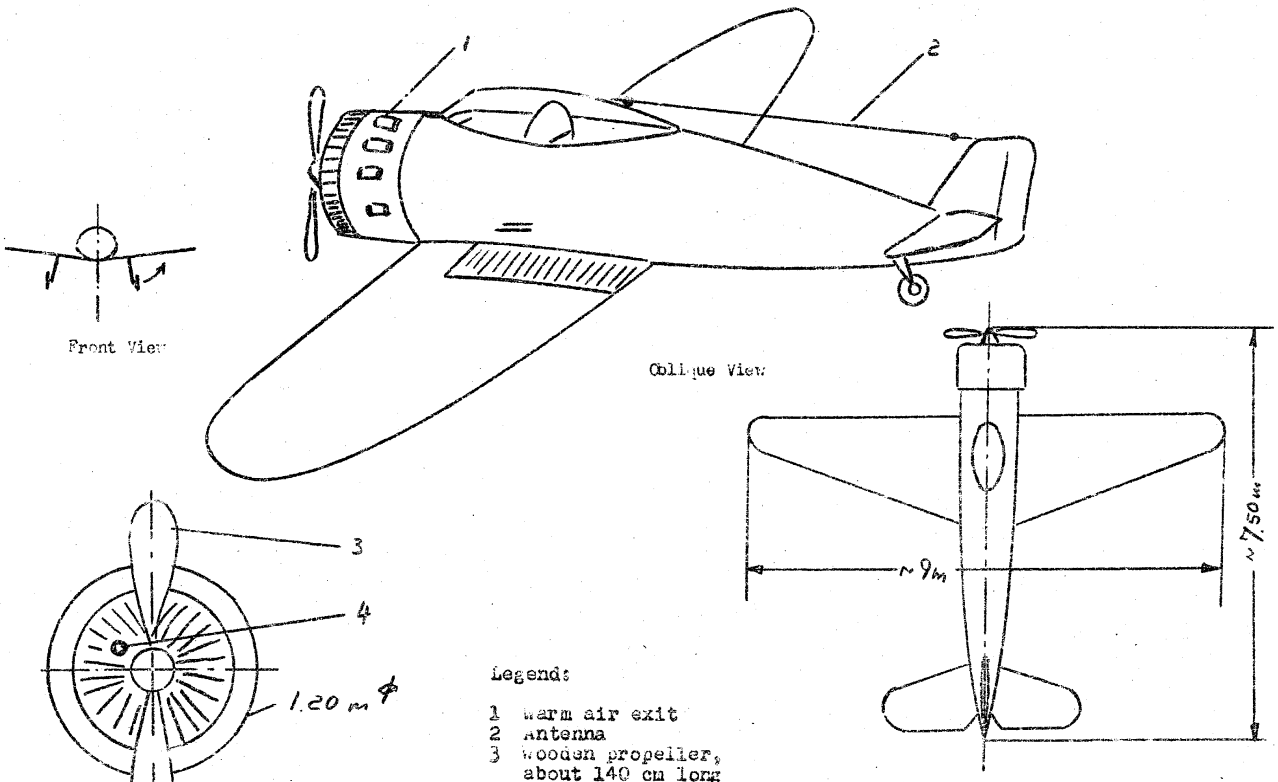


not to scale

Top View

Single-Engine Fighter Seen in Saratov

25X1



Legend:

1 Warm air exit
2 Antenna
3 Wooden propeller, about 140 cm long
4 Machine gun of about 20 mm caliber, about 10 cm from propeller hub

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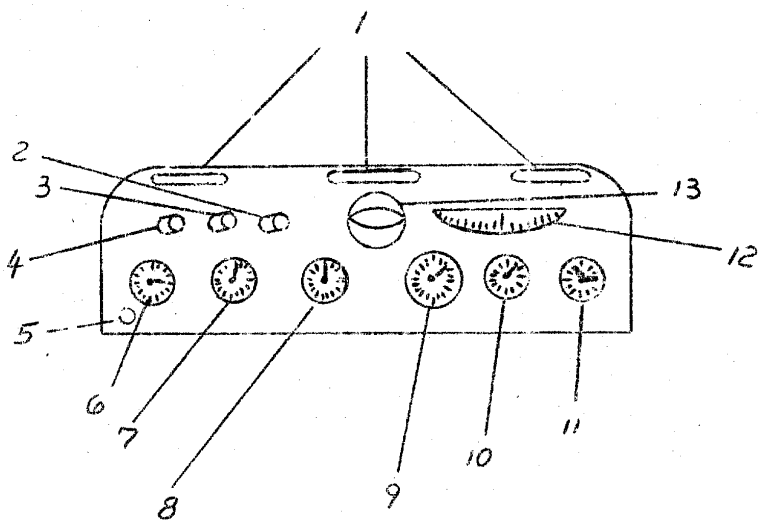
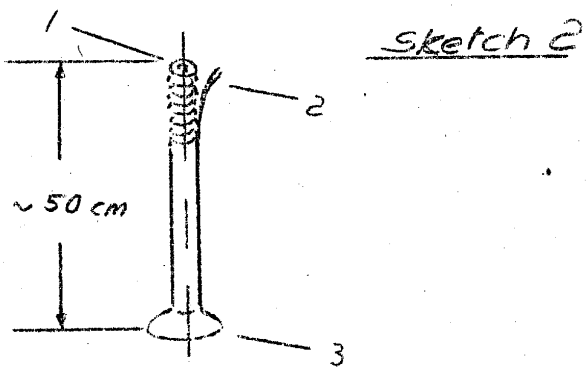
Instrument Board of Single-Engine Fighter

Sketch 1



Control Stick of Single-Engine Fighter

Sketch 2



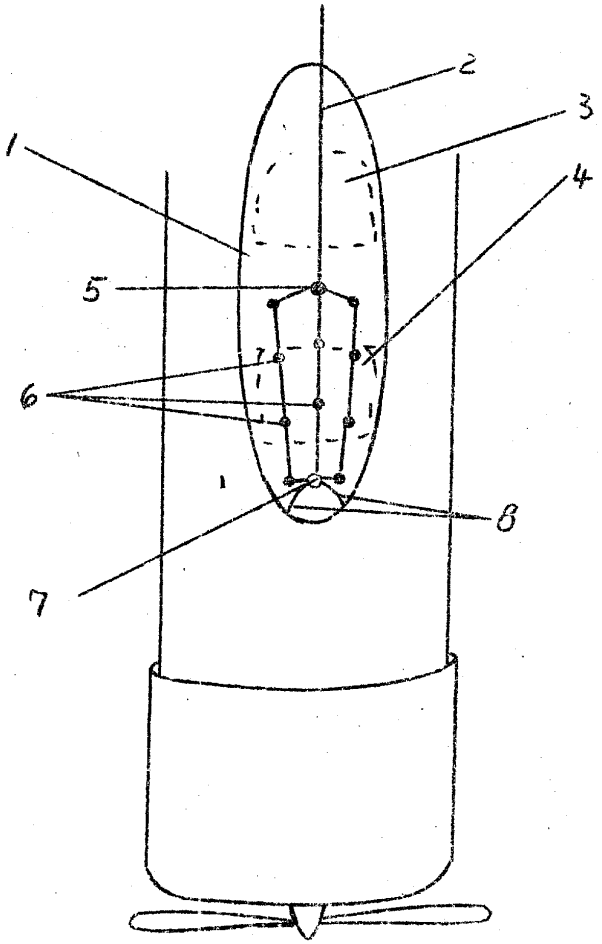
Legends:

1 Locking device for machine gun trigger
2 Trigger release
3 Hollow spherical device

Legend.

1. Panel lights.
2. White lamp, presumably landing light.
3. Green lamp for landing gear.
4. Red lamp for armament.
5. Push-pull button, no details available.
6. Oil pressure gauge.
7. Gasoline gauge.
8. Coarse altimeter.
9. Sensitive altimeter.
10. Airspeed indicator.
11. Instrument board clock.
12. Rpm indicator.
13. Presumably artificial horizon.

Detail Sketch of Cabin of Single-Engine Fighter as Seen from above



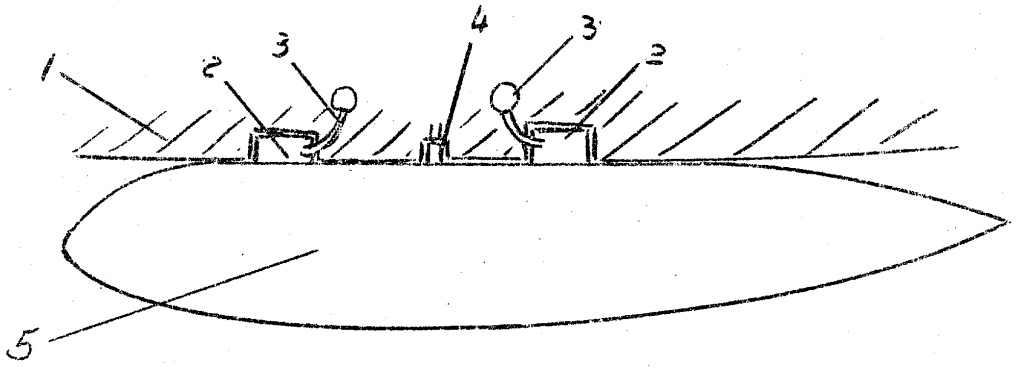
Legend: See next page.

Legend.

1. Plexiglass cabin.
2. Antenna.
3. Rear pilot seat.
4. Forward pilot seat.
5. Antenna socket and insulator.
6. Insulators.
7. Main insulator and lead-in to instrument board.
8. Wires within the cabin; all other wires are fitted outside the cabin. The wires are 2 mm in diameter.

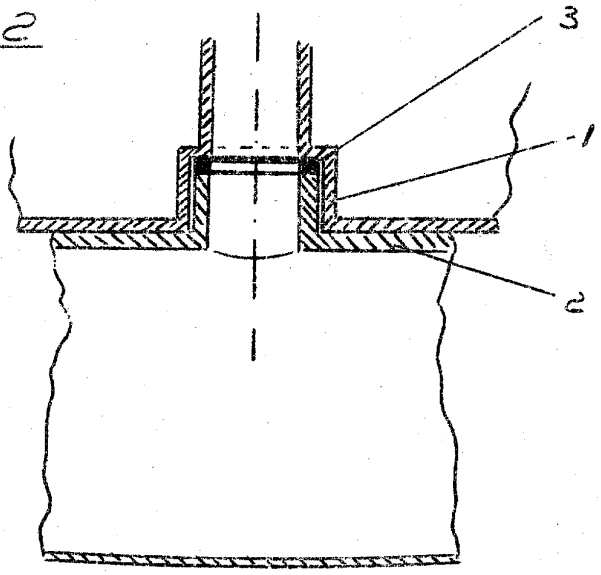
Detail Sketch of Auxiliary Tank of Single-Engine Fighter

Sketch 1



Detail Sketch of Connection of Auxiliary Fuel Tank

Sketch 2



Legend: See next page.

Legend.

Sketch 1:

1. Wing.
2. Bow frames.
3. Holding jacks.
4. Fuel outlet.
5. Auxiliary tank.

Sketch 2:

1. Wing.
2. Auxiliary tank.
3. Gasket.